



DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 21-05]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at karma.d.job.civ@mail.mil or (703) 697-8976.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 21-05 with attached Policy Justification and Sensitivity of Technology.

Dated: December 17, 2020.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer,

Department of Defense.



DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

NOV 09 2020

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 21-05 concerning the Air Force's proposed Letter(s) of Offer and Acceptance to the Government of the United Arab Emirates for defense articles and services estimated to cost \$2.97 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

A handwritten signature in black ink, reading "Heidi H. Grant", is positioned above the printed name and title.

Heidi H. Grant
Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Regional Balance (Classified document provided under separate cover)

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Government of the United Arab Emirates

(ii) Total Estimated Value:

Major Defense Equipment*	\$.90 billion
Other	<u>\$2.07 billion</u>
TOTAL	\$2.97 billion

(iii) Description and Quantity or Quantities of Articles or Services under consideration for Purchase:

Major Defense Equipment (MDE):

Up to Eighteen (18) Weapons-Ready MQ-9B Remotely Piloted Aircraft
Twelve (12) Fixed Certifiable Ground Control Stations (CGCSs)
Twenty-five (25) Raytheon Multi-Spectral Targeting Systems-D (MTS-D) EO/IR Sensors
Nineteen (19) Lynx AN/APY-8 Synthetic Aperture Radars (SAR) with Ground Moving Target Indicator (GTMI)
Eighteen (18) RIO™ Communication Intelligence Systems
Sixty-six (66) Embedded Global Positioning System/Inertial Navigations Systems (EGI) with Selective Availability Anti-Spoofing Modules (SAASMs)
Five hundred fifteen (515) AGM-114R Hellfire Missiles
Twelve (12) KMU-572 Joint Direct Attack Munitions (JDAM) Tail Kits for 500LB Bombs
Four (4) MXU-650 Airfoil Groups for 500LB Paveway II GBU-12
Seven (7) MXU-1006 Airfoil Groups for 250LB Paveway II GBU-58
Eleven (11) MAU-169 or MAU-209 Computer Control Groups (CCGs) for 250LB/500LB Paveway II GBU-58/GBU-12
Six (6) FMU-139 Fuse Systems
Twelve (12) MK-82 General Purpose 500LB Inert Bombs
Four (4) GBU-39 Small Diameter Bomb (SDB) Guided Test Vehicle (GTV) Inert Practice Munitions (T-1) with Fuse

Non-MDE:

Also included are Honeywell TPE-331 turboprop engines; Certifiable Ground Control Stations (CGCS); mobile Satellite Communication Ground Data Terminals (SGDTs); Link-16 KOR-24A Small Tactical Terminals; Automatic Information System (AIS); Rohde & Schwartz UHF/VHF radios; AN/DPX-7 IFF Transponders; Satellite Communication (SATCOM) antennas and modems with USG encryption; Secure SATCOM systems; SeaSpray 7500 maritime radars; SAGE 750 Electronic Surveillance Measures System; KY-100M security voice terminals; KIV-77 Mode 5 IFF cryptographic appliques; U.S. Government Certified Encryption Solution; Rover 6i compatible systems; MQ-9B training simulator; Due Regard Radars (DRR); Electronic Warfare (EW) in-country threat library programming capability; BRU-71A bomb racks; BRU-78/A bomb racks; Hellfire missile rail kits; AN/AWM-103/B Station Stores Test Sets; Common Munitions Built-in-Test Reprogramming Equipment (CMBRE) Plus Block II; Anti-Submarine Warfare (ASW) mission kits, receivers, and acoustic processors; AN/SSQ-

36B thermometric sonobouys; AN/SSQ-53G passive sonobouys; AN-SSQ-62F active sonobouys; ASW acoustic operator workstations; weapons loading equipment; initial spare and repair parts; hard points, power, and data connections for weapons integration; DSU-38 Laser Illuminated Target Detector for GBU-54; AN/PYQ-10C Simple Key Loaders; Electronic Intelligence System; weapons integration; support and test equipment; publications and technical documentation; personnel training and training equipment; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support.

(iv) Military Department: Air Force (AE-D-SAC)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc. Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in Defense Article or Defense Services Proposed to be Sold: See Attached Annex

(viii) Date Report Delivered to Congress: **November 09, 2020**

*As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

United Arab Emirates – MQ-9B Remotely Piloted Aircraft

The Government of the United Arab Emirates (UAE) has requested to buy up to eighteen (18) Weapons-Ready MQ-9B, Remotely Piloted Aircraft; twenty-five (25) Raytheon Multi-Spectral Targeting Systems-D (MTS-D) EO/IR Sensors; nineteen (19) Lynx AN/APY-8 Synthetic Aperture Radars (SAR) with Ground Moving Target Indicator (GTMI); eighteen (18) RIO™ Communication Intelligence Systems; sixty-six (66) Embedded Global Positioning System/Inertial Navigations Systems (EGI) with Selective Availability Anti-Spoofing Modules (SAASMs); five hundred fifteen (515) AGM-114R Hellfire Missiles; twelve (12) KMU-572 Joint Direct Attack Munitions (JDAM) Tail Kits for 500LB Bombs; four (4) MXU-650 Airfoil Groups for 500LB Paveway II GBU-12; seven (7) MXU-1006 Airfoil Groups for 250LB Paveway II GBU-58; eleven (11) MAU-169 or MAU-209 Computer Control Groups (CCGs) for 250LB/500LB Paveway II GBU-58/GBU-12; six (6) FMU-139 Fuse Systems; twelve (12) MK-82 General Purpose 500LB Inert Bombs; and four (4) GBU-39 Small Diameter Bomb (SDB) Guided Test Vehicle (GTV) Inert Practice Munitions (T-1) with Fuse. Also included are Honeywell TPE-331 turboprop engines; Certifiable Ground Control Stations (CGCS); mobile Satellite Communication Ground Data Terminals (SGDTs); Link-16 KOR-24A Small Tactical Terminals; Automatic Information System (AIS); Rohde & Schwartz UHF/VHF radios; AN/DPX-7 IFF Transponders; Satellite Communication (SATCOM) antennas and modems with USG encryption; Secure SATCOM systems; SeaSpray 7500 maritime radars; SAGE 750 Electronic Surveillance Measures System; KY-100M security voice terminals; KIV-77 Mode 5 IFF cryptographic appliques; U.S. Government Certified Encryption Solution; Rover 6i compatible systems; MQ-9B training simulator; Due Regard Radars (DRR); Electronic Warfare (EW) in-country threat library programming capability; BRU-71A bomb racks; BRU-78/A bomb racks; Hellfire missile rail kits; AN/AWM-103/B Station Stores Test Sets; Common Munitions Built-in-Test Reprogramming Equipment (CMBRE) Plus Block II; Anti-Submarine Warfare (ASW) mission kits, receivers, and acoustic processors; AN/SSQ-36B thermometric sonobouys; AN/SSQ-53G passive sonobouys; AN/SSQ-62F active sonobouys; ASW acoustic operator workstations; weapons loading equipment; initial spare and repair parts; hard points, power, and data connections for weapons integration; DSU-38 Laser Illuminated Target Detector for GBU-54; AN/PYQ-10C Simple Key Loaders; Electronic Intelligence System; weapons integration; support and test equipment; publications and technical documentation; personnel training and training equipment; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support. The overall total estimated value is \$2.97 billion.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of an important regional partner. The UAE has been, and continues to be, a vital U.S. partner for political stability and economic progress in the Middle East.

The proposed sale will improve the UAE's capability to meet current and future threats by providing timely Intelligence, Surveillance, and Reconnaissance (ISR), target acquisition, locate submarines and counter-land and counter-surface sea capabilities for its security and defense. The capability is a deterrent to regional threats and strengthens its self-defense. The UAE has demonstrated a commitment to modernizing its military and will have no difficulty absorbing these articles into its armed forces.

The proposed sale of this equipment and support will alter the basic military balance in the Arabian Gulf region by expanding the release of a weapons ready Remotely Piloted Aircraft to

the region.

The principal contractors will be General Atomic Aeronautical Systems, San Diego, CA; Lockheed Martin, Bethesda, MD; Raytheon, Waltham, MA; L3Harris, Inc., Melbourne, FL; and Leonardo SpA, Rome, Italy. There are no known offset agreements proposed in connection with this potential sale. However, the purchaser typically requests offsets. Any offset agreements will be defined in negotiations between the purchaser and the contractor(s).

Implementation of this proposed sale will not require the assignment of any additional U.S. Government or contractor representatives outside the United States.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 21-05
Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The MQ-9B Remotely Piloted Aircraft (RPA) is a weapons-ready aircraft designed for Medium-Altitude Long-Endurance (MALE) Intelligence, Surveillance and Reconnaissance (ISR), Target Acquisition, and Strike Missions. The MQ-9B RPA is not a U.S. Air Force program of record but has close ties to, and builds upon, the proven success of the MQ-9A Reaper. The MQ-9B is a highly modular, easily configurable aircraft that contains the necessary hard points, power, and data connections to accommodate a variety of payloads and munitions to meet multiple missions, including counter-land, counter-sea, and anti-submarine strike operations. The system is designed to be controlled by two operators within a Certifiable Ground Control Station (CGCS). The CGCS is designed to emulate a reconnaissance aircraft cockpit, giving users extensive means to operate both the aircraft and sensors. The MQ-9B is able to operate using a direct Line-of-Sight (LOS) datalink or Beyond Line-of-Sight (BLOS) through satellite communications (SATCOM). The MQ-9B system can be deployed from a single site that supports launch/recovery, mission control, and maintenance. The system also supports remote-split operations where launch/recovery and maintenance occur at a Forward Operating Base (FOB) and mission control is conducted from another location or Main Operating Base (MOB).

2. The Ground Control Station (GCS) can be either fixed or mobile. The fixed GCS is enclosed in a customer-specified shelter. It incorporates workstations that allow operators to control and monitor the aircraft, as well as record and exploit downlinked payload data. The mobile GCS allows operators to perform the same functions and is contained on a mobile trailer. Workstations in either GCS can be tailored to meet customer requirements.

3. The SAGE 750 Electronic Surveillance Measures (ESM) System is a United Kingdom-produced digital electronic intelligence (ELINT) sensor that analyzes the electromagnetic spectrum to map the source of active emissions. Using highly accurate Direction Finding (DF)

antennas, SAGE builds target locations and provides situational awareness, advance warning of threats, and the ability to cue other sensors.

4. The Raytheon Multi-Spectral Targeting Systems-D (MTS-D) EO/IR sensors is a multi-spectral Targeting System with Laser Target Designator (LTD). A multi-use Electro Optical (EO)/Infrared (IR) sensor provides long-range surveillance, high-altitude target acquisition, tracking, range-finding, and laser designation for all tri-service and NATO laser-guided munitions, with capabilities up to and including high definition color TV, high definition short-wave IR, medium-wave IR, and long-wave IR sensors. The AN/DAS-4 is an evolutionary upgrade to the current AN/DAS-1 system.

5. The Lynx AN/APY-8 Synthetic Aperture Radars (SAR) with Ground Moving Target Indicator (GTMI) System provides all-weather surveillance, tracking, and targeting for military and commercial customers from manned and unmanned vehicles.

6. The KOR-24A Small Tactical Terminal Link-16 is a command, control communications, and intelligence (C3I) system incorporating high-capacity, jam-resistant, digital communication links for exchange of near real-time tactical information, including both data and voice, among air, ground, and sea elements.

7. The L3 Harris RIO™ Communications Intelligence System incorporates radio receivers and flexible digital processing to create the ability to intercept, location, and copy adversary communications. The system is flexible enough that it can detect a wide variety of types of communications. The open design allows the system to be upgraded with new software features as adversary communications change.

8. The Embedded GPS-INS (EGI) with Selective Availability Anti-Spoofing Module (SAASM) is a self-contained navigation system that provides the following: acceleration, velocity, position, attitude, platform azimuth, magnetic and true heading, altitude, body angular rates, time tags, and coordinated universal time (UTC) synchronized time. SAASM enables the GPS receiver access to the encrypted P(Y) signal providing protection against active spoofing attacks.

9. The AN/DPX-7 is an Identification Friend or Foe (IFF) Transponder used to identify and track aircraft, ships, and some ground forces to reduce friendly fire incidents.

10. Leonardo SeaSpray Maritime Multi-Role Patrol Radar is a synthetic aperture X-band radar that provides small-target maritime detection in high seas, maritime search (including submarine periscopes and semi-submersibles), radar imaging of ocean targets, and weather detection and avoidance.

11. The C-Band Line-of-Sight (LOS) Ground Data Terminals and Ku-Band SATCOM GA-ASI Transportable Earth Stations (GATES) provide command, control, and data acquisition for the MQ-9B.

12. The KY-100M is a lightweight terminal for secure voice and data communications. The KY-100M provides wideband/narrowband half-duplex communication. Operating in tactical ground, marine and airborne applications, the KY-100M enables secure communication with a broad range of radio and satellite equipment.

13. The Honeywell TPE-331-10-GD Turboprop Engine is used in a variety of airborne platforms, including the MQ-9B.

14. The Rohde & Schwartz UHF/VHF Radio is a multi-band, portable, two-way communication radio.

15. The KIV-77 Mode 5 crypto applique computer for IFF is Type 1 certified by the National Security Agency and provides information assurance for both legacy Mode 4 and new Mode 5 IFF equipment. The KIV-77 is used to store the classified keys.

16. The AN/APQ-10C Simple Key Loader is a handheld fill device for securely receiving, storing, and transferring data between cryptographic and communications equipment.

17. The Joint Direct Attack Munitions (JDAM) is a guidance set that converts existing unguided bombs (MK-82, MK-83, MK-84, BLU-109, BLU-110, BLU-111, BLU-117, BLU-126 (Navy) or BLU-129 warhead) into an accurate, adverse weather “smart” munition. The Guidance Set consists of a Tail Kit, which contains the Inertial Navigation System (INS) and a Global Positioning System (GPS), and a set of Aerosurfaces and an umbilical Cover, which allows the JDAM to improve the accuracy of unguided, general purpose bombs. The Guidance Set, when combined with a warhead and appropriate fuze, forms a JDAM Guided Bomb Unit (GBU). The JDAM Guidance Set gives these bombs adverse weather capability with improved accuracy. The JDAM weapon can be delivered from modest standoff ranges at high or low altitudes against a variety of land and surface targets during the day or night. After release, JDAM autonomously guides to a target, using the resident GPS-aided INS guidance system. The JDAM is capable of receiving target coordinates via preplanned mission data from the delivery aircraft, by onboard aircraft sensors (i.e., FLIR, Radar, etc.) during captive carry, or from a third-party source via manual or automated aircrew cockpit entry.

a) The KMU-572 is the guidance set for a GBU-38 (500-pound) JDAM.

18. The Laser JDAM (GBU-54) converts existing unguided free-fall bombs into precision guided “smart” munitions by adding a new tail section containing Inertial Navigation System (INS) guidance/Global Positioning System (GPS) guidance, as well as adds a semi-active laser seeker. This allows the weapon to strike targets moving at up to 70 mph. The LJDAM weapon consists of a DSU-38 sensor, a warhead-specific JDAM guidance set installed on the bomb body, and a fuze.

19. MK-82 Inert General Purpose (GP) bomb is a 500-pound, free-fall, unguided, low-drag inert weapon used for integration testing. There is no explosive fill.

20. GBU-12/58 Paveway II (PW-II) 500-pound (GBU-12) and 250-pound (GBU-58) are maneuverable, free-fall, laser-guided bombs (LGBs) that guides to reflected laser energy from the desired target. Employment of the LGB is the same as a normal general purpose (GP) warhead, except the semi-active guidance corrects for employment errors inherent in any delivery system. Laser designation for the weapon can be provided by a variety of laser target markers or designators from the air or ground. The Paveway system consists of a laser guidance kit, a computer control group (CCG), a warhead-specific Air Foil Group (AFG) that attach to the nose and tail of MK-81 and MK-82 General Purpose (GP) bombs, and a fuze. The weapon is primarily used for precision bombing against non-hardened targets.

a) The MAU-169 or the MAU-209 are the CCG for the GBU-12 and GBU-58.

b) The MXU-650 is the AFG for the 500-pound GBU-12.

c) MXU-1006/B is the AFG for the 250-pound GBU-58.

21. AGM-114-R2 Hellfire II Semi-Active Laser (SAL) Missiles are rail-launched guided missiles developed and produced by Lockheed Martin. The guidance system employs a SAL seeker. The SAL missile homes in on the laser energy reflected off a target that has been illuminated by a laser designator. The laser can be on either the launch platform or another platform that can be separated from it by several kilometers. The target sets are armor, bunkers, caves, enclosures, boats, and enemy personnel. The AGM-114-R2 Hellfire II missiles use pulse-coded laser illumination. The R2 variant includes a Height-of-Burst (HOB)/proximity sensor. The AGM-114 R2 missiles each have a multi-purpose selectable warhead and inertial measurement unit (IMU)-Aided Trajectories.

22. The GBU-39 Small Diameter Bomb Increment 1 (SDB-1) is a 250-pound, GPS-aided inertial navigation system, small autonomous, day or night, adverse weather, conventional, air-to-ground precision glide weapon able to strike fixed and stationary re-locatable non-hardened targets from standoff ranges. It is intended to provide aircraft with an ability to carry a high number of bombs. Aircraft are able to carry four SDBs in place of one 2,000-pound bomb.

a) SDB I Guided Test Vehicle (GTV) is an SDB II configuration used for land or sea range-based testing of the SDB I weapon system. The GTV has common flight characteristics of an SDB I All Up Round (AUR), but in place of the multi-effects warhead is a Flight Termination, Tracking, and Telemetry (FTTT) subassembly that mirrors the AUR multi-effects warhead's size and mass properties, yet provides safe flight termination, free flight tracking, and telemetry of encrypted data from the GTV to the data receivers. The SDB I GTV can have either inert or live fuses. All other flight control, guidance, data-link, and seeker functions are representative of the SDB I AUR.

23. The Joint Programmable Fuze (JPF) FMU-139 is a multi-delay, multi-arm and proximity sensor compatible with general purpose blast, frag, and hardened-target penetrator weapons. The JPF settings are cockpit selectable in flight when used numerous precision-guided weapons. It can interface with numerous weapons including GBU-12, GBU-58, GBU-54, and GBU-38.

24. The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

25. If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

26. A determination has been made that the United Arab Emirates can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

27. All defense articles and services listed in this transmittal are authorized for release and export to the Government of the United Arab Emirates.

